

ABSTRACT

An image processing system and method having a statistical appearance model for interpreting a digital image. The appearance model has at least one model parameter. The
5 system and method comprises a two dimensional first model object including an associated first statistical relationship, the first model object configured for deforming to approximate a shape and texture of a two dimensional first target object in the digital image. Also included is a search module for selecting and applying the first model object to the image for
generating a two dimensional first output object approximating the shape and texture of the
10 first target object, the search module calculating a first error between the first output object and the first target object. Also included is an output module for providing data representing the first output object to an output. The processing system uses interpolation for improving image segmentation, as well as multiple models optimised for various target object
configurations. Also included is a model labelling that is associated with model parameters,
15 such that the labelling is attributed to solution images to aid in patient diagnosis.

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